

What Is Claimed Is:

1. A printing method carried out by a printing device for receiving data from a plurality of data source apparatuses and then printing said data, said method comprising the steps of:

receiving a connection request from a first data source apparatus and establishing a logical connection with said first data source apparatus;

receiving a connection request from a second data source apparatus and setting the role of said printing device as a communication slave initially while a connection is established with said first data source apparatus, and then switching the role of said printing device from a communication slave to a communication master to enable a connection to be established with both said first and second data source apparatuses;

receiving data from said first and second data source

apparatuses while the connections are also established with said first and second data apparatuses;

processing and printing said data received from said first data source apparatus and said second data source apparatus.

2. The printing method according to claim 1, further comprising the step in which, when a logical connection is established with said second data source apparatus and data are received from said second data source apparatus while a connection is also established with said first data source apparatus and data received from said first data source apparatus are being transferred to a first data processing portion from among a plurality of data processing portions for processing data received from said data source apparatuses, said received data are stored temporarily in a buffer, and when said data can be transferred to a second data processing portion, said data

are read from said buffer and transferred to said second data processing portion.

3. The printing method according to claim 1, further comprising the step in which, when a logical connection is established with said second data source apparatus and a command or data are received from said second data source apparatus while a logical connection is also established with said first data source apparatus and data received from said first data source apparatus are being transferred to a first data processing portion from among a plurality of data processing portions for processing data received from said data source apparatuses, transmission of a response signal to said second data source apparatus is delayed, and when the data received from said second data source apparatus can be transferred to a second data processing portion, said response signal is transferred to said second data source apparatus.

4. The printing method according to claim 1, further comprising the step in which, when a logical connection is established with said second data source apparatus and a request for notification of a credit value indicating the data size of the receivable data is received from said second data source apparatus while a logical connection is also established with said first data source apparatus and data received from said first data source apparatus are being transferred to a first data processing portion from among a plurality of data processing portions for processing data received from said data source apparatuses, said second data source apparatus is informed of said credit value in response to said notification request, and thus data are received from said second data source apparatus, stored temporarily in a buffer, and when said data can be transferred to a second data processing portion, said data are read from said buffer and transferred to said second data

processing portion.

5. The printing method according to claim 4, wherein a credit value indicating zero is transmitted back to said second data source apparatus in said transfer step when an empty region having a size which is equal to or greater than said credit value cannot be retained in said buffer upon reception of said credit value notification request from said second data source apparatus.

6. The printing method according to claim 2 or 3, wherein a logical connection is established with said data source apparatus in accordance with Bluetooth specifications in said connection step, and

a profile provided on an upper OBEX level is executed in said transfer step or said transmitting back step.

7. The printing method according to claim 6, wherein said profile is BPP or BIP.

8. The printing method according to claim 4, wherein a logical connection is established with said data source apparatus in accordance with Bluetooth specifications in said connection step, and

HCRP is performed in said transfer step.

9. A printing device for receiving data from a plurality of data source apparatuses, said device comprising:

connection component receiving connection requests from said data source apparatuses, establishing a logical connections with each of said data source apparatuses, and receiving data from said data source apparatuses; and

role setting component setting the role of the printing device to one of either a communication slave or a

communication master when said connection component receives connection requests from said data source apparatuses,

wherein said role setting component sets the role of the printing device as a communication slave initially when said connection component receives said a connection request from a second data source apparatus while logically connected to said first data source apparatus, and then switch the role of the printing device from a communication slave to a communication master to enable said connection component to establish a logical connection with both said first and second data source apparatuses.

10. A computer program which may be installed in a device for receiving data from a plurality of data source apparatuses, said device comprising:

connection component receiving connection requests from said data source apparatuses, establishing connections with

said data source apparatuses, and receiving data from said data source apparatuses;

role setting component setting the role of the printing device to one of either a communication slave or a communication master when said connection component receives a connection request from each of said data source apparatus;

a plurality of data processing portions for processing data received by said connection component from said data source apparatuses; and

a buffer for storing said received data temporarily,

wherein said role setting component sets the role of the printing device as a communication slave initially when said connection component receives said connection request from a second data source apparatus while connected to a first data source apparatus, and then switch the role of the device from a communication slave to a communication master to enable said connection component to establish a connection with both said



first and second data source apparatuses,

said computer program causing a computer to execute:

a step of transferring data received from said first data source apparatus by said connection component when said connection component is connected to said first data source apparatus to a first data processing portion from among said plurality of data processing portions;

a step in which, when said connection component is connected to said second data source apparatus and data are received from said second data source apparatus by said connection component while data received by said connection component from said first data source apparatus are being transferred to said first data processing portion, said data are stored temporarily in said buffer; and

a step in which, when the data received from said second data source apparatus can be transferred to said second data processing portion, said data are read from said buffer

and transferred to said second data processing portion.

11. A computer program which may be installed in a device for receiving data from a plurality of data source apparatuses, said device comprising:

connection component receiving connection requests from said data source apparatuses, establishing a connection with each of said data source apparatus, and receiving data from said data source apparatuses;

role setting component setting the role of the printing device to one of either a communication slave or a communication master when said connection component receives a connection request from each of said data source apparatus; and

a plurality of data processing portions for processing data received by said connection component from said data source apparatuses,

wherein said role setting component sets the role of the printing device as a communication slave initially when said connection component receives said connection request from a second data source apparatus while connected to a first data source apparatus, and then alter the role of the device from a communication slave to a communication master to enable said connection component to establish a connection with both said first and second data source apparatuses,

said computer program causing a computer to execute:

a step of transmitting a response signal back to said first data source apparatus in response to reception of a command or data from said first data source apparatus when said connection component is connected to said first data source apparatus;

a step of receiving data from said data source apparatus in response to said response signal, and transferring said received data to a first data processing portion from among

said plurality of data processing portions;

a step in which, when said connection component is connected to said second data source apparatus and a command or data are received from said second data source apparatus while data received from said first data source apparatus are being transferred to said first data processing portion, transmission of a response signal back to said second data source apparatus in response thereto is delayed; and

a step in which, when the data received from said second data source apparatus can be transferred to a second data processing portion, said delayed response signal is transmitted back to said second data source apparatus.

12. A computer program which may be installed in a device for receiving data from a plurality of data source apparatuses, said device comprising:

connection component receiving connection requests

from said data source apparatuses, establishing a connection with each of said data source apparatus, and receiving data from said data source apparatuses;

role setting component setting the role of the printing device to one of either a communication slave or a communication master when said connection component receives a connection request from each of said data source apparatus;

a buffer for storing said received data temporarily;

and

a plurality of data processing portions for processing data received by said connection component from said data source apparatuses,

wherein said role setting component sets the role of the printing device as a communication slave initially when said connection component receives said connection request from a second data source apparatus while connected to said first data source apparatus, and then switch the role of the device

from a communication slave to a communication master to enable said connection component to establish a connection with both said first and second data source apparatuses,

said computer program causing a computer to execute:

a step in which, when a request for notification of a credit value indicating the data size of the data that can be received by said printing device is received from said data source apparatus, said first data source apparatus is informed of said credit value in response to said notification request;

a step of receiving data of a size which equals or falls below said credit value from said first data source apparatus, and transferring said received data to a first data processing portion from among said plurality of data processing portions;

a step in which, when said connection component are connected to said second data source apparatus and a request for notification of said credit value is received from said second

data source apparatus while said connection component is also transferring data received from said first data source apparatus to said first data processing portion, said second data source apparatus is notified of said credit value in response to said notification request, whereupon data are received from said second data source apparatus, and the received data are stored temporarily in said buffer; and

a step in which, when the data received from said second data source apparatus can be transferred to a second data processing portion, said data are read from said buffer and transferred to said second data processing portion.